

REMARKS

Reexamination and reconsideration of the application as amended are requested. Support for the amended claims is found in figures 2 and 3.

The examiner's rejection of claims 1-3, 6, 9-13, 16 and 17 as being "obvious", under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Fond '683 in view of Cosentino '341. Claims 2-3 depend from claim 1, claims 9-10 depend from claim 6, claims 12-13 depend from claim 11, and claim 17 depends from claim 16.

The Examiner correctly states that Fond discloses a first flow path from a dialysis fluid source to the dialysate side of a kidney dialysis machine (which is understood by applicants to be flow path ABC in figure 1) and discloses a second flow path away from the machine (which is understood by applicants to be flow path DEF in figure 1). The Examiner correctly states that Fond also discloses a bypass interconnection path (which is understood by applicants to be flow path ABEF in figure 1). The Examiner correctly states that Fond further discloses using the interconnection path to calibrate flowmeters 7 and 8 (which is understood by applicants to follow from the flow rate through flowmeter 7 being the same [matched] as the flow rate through flowmeter 8 when the bypass interconnection path is used). The Examiner correctly states that Fond additionally discloses disconnecting the bypass interconnection path.

However, Fond does not teach, suggest or describe controlling the fluid flow of one of the first and second flow paths to match a property of the first and second fluid flows or controlling the flow rate of the first fluid flow to match the flow rate of the second fluid flow when the first and second flow paths are disconnected as required by applicants' claims 1 and 6. Fond does his pump control through device 11 when the first and second flow paths ABC and DEF are connected. Further, claims 1 and 6 also require that the second flow source be independent of the first flow source which is in contrast to Fond whose second flow source (the haemodialyser 3) is connected to the first flow source (intake A) as seen in figure 1 of Fond.

The Examiner alleges that Cosentino teaches controlling a flow rate in a first flow path to match the flow rate in a second flow path utilizing data obtained from both the transducer

readings during connection of the bypass path and transducer readings following reconnection of the second fluid source and that it would have been obvious to have modified Fond by providing the flow rate matching of Cosentino to stabilize the ultrafiltration or dialysis rate of the blood being purified. Applicants respectfully disagree.

Cosentino states that pumps 20 and 28 are linked as at 30 such as by a mechanical linkage (and not by readings from first and second flow-rate transducers as required by applicants' claims 1 and 6) to maintain their volume flow substantially equal (see column 2, lines 57-61). Also, Cosentino does not teach, suggest or describe controlling the fluid flow of one of the first and second flow paths to match a property of the first and second fluid flows or the flow rate of the first fluid flow to match the flow rate of the second fluid flow when the first and second flow paths are disconnected as required by applicants' claim 1 and 6. Cosentino does his maintaining of equal volume flow when the flow path containing pump 20 is connected to the flow path containing pump 28. Modifying Fond by providing the flow rate matching of Cosentino (through undescribed device 11 of Cosentino) would still result in flow rate matching when the first and second flow paths are connected while applicants' claims 1 and 6 require property matching or flow rate matching with the first and second flow paths disconnected. Further, claims 1 and 6 also require that the second flow source be independent of the first flow source which is in contrast to Cosentino. However one defines a second flow source in Cosentino (such as the dialyzer 10), the second flow source of Cosentino would be connected to, and hence not independent of, the first flow source (reservoir 16) of Cosentino.

In regard to claim 10 which requires the first flow path 10 to be a water replacement flow path of a kidney dialysis machine and the second flow path 12 to be a waste water flow path of the kidney dialysis machine, neither Fond nor Cosentino teach, discuss or describe a water replacement flow path. Fond is concerned with controlling flows to and from the haemodialyser 3. Although Fond does disclose extraction pump 17 which extracts from the circuit 1 a quantity of dialysis liquid equal to the quantity of ultrafiltrate to be withdrawn from the blood (see column 8, lines 1-6), Fond does not disclose a second flow path which is the extracted waste water from the blood of the patient and a first flow path which is replacement water for the patient. Cosentino likewise is concerned with controlling flows to and from the dialyzer 10.

Serial No.: 10/045,776
Attorney Docket No.: DP-307032
Amendment

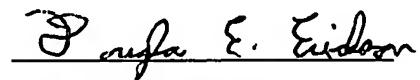
Although Cosentino does disclose a flow meter 31 leading to a receptacle 32 to measure the amount of water removed by ultrafiltration from the blood of the patient, the ultrafiltrate volume measured is not the ultrafiltrate but an amount of dialysate and ultrafiltrate equal to the amount of ultrafiltrate (see column 4, lines 8-20), and Cosentino does not disclose a second flow path which is the extracted waste water from the blood of the patient and a first flow path which is replacement water for the patient.

Claims 11 and 16 require the second flow source of the second flow path to be independent of the first flow source of the first flow path. The second flow source of Fond is the haemodialyser 3 which is connected to, and hence is not independent of, the first flow source (intake A) of Fond via the first flow path ABC as seen in figure 1. Likewise, however one defines a second flow source in Cosentino (such as the dialyzer 10), the second flow source would be connected to, and hence not independent of, the first flow source (reservoir 16) of Cosentino.

The examiner's rejection of claims 4, 5, 7, 8, 14, 15, 18 and 19 as being "obvious", under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Fond '683 in view of Cosentino '341 and further in view of Lichtenstein '983. Claims 4 and 5 depend from claim 1, claims 7 and 8 depend from claim 6, claims 14 and 15 depend from claim 11, and claims 18 and 19 depend from claim 16. Applicants' previous remarks concerning the patentability of claims 1, 6, 11 and 16 over Fond in view of Cosentino are herein incorporated by reference.

Inasmuch as each of the rejections has been answered by the above remarks and amended claims, it is respectfully requested that the rejections be withdrawn, and that this application be passed to issue.

Respectfully submitted,



Douglas E. Erickson

Reg. No. 29,530

Serial No.: 10/045,776
Attorney Docket No.: DP-307032
Amendment

THOMPSON HINE LLP
2000 Courthouse Plaza NE
10 West Second Street
Dayton, Ohio 45402-1758
(937) 443-6814
313598